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NAD SERVICE MANUAL

3130

STEREO AMPLIFIER

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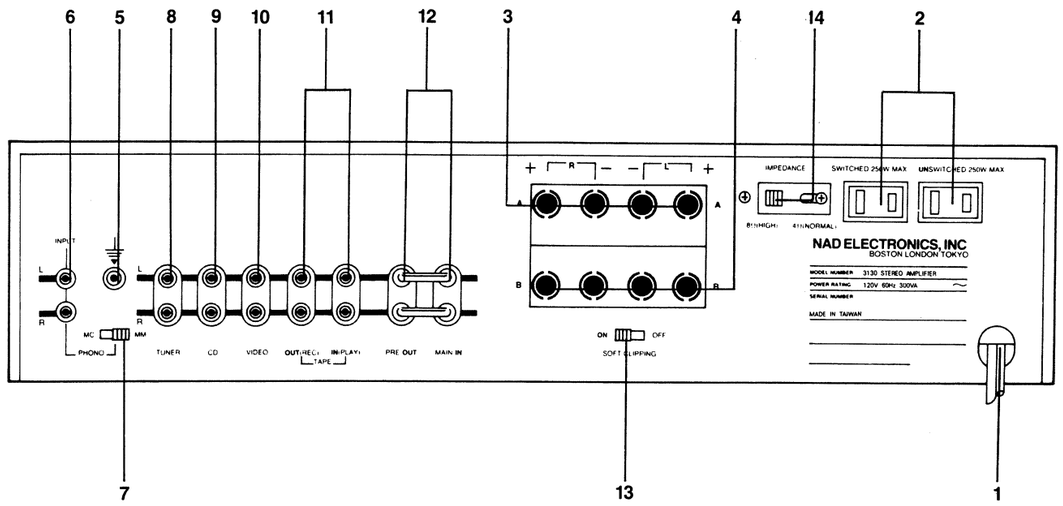
REAR PANEL

1. AC Line Cord.
2. AC Convenience Outlets.
3. Speakers A.
4. Speakers B.
5. Phono Ground.
6. Phono Input.
7. MM/MC Selector.
8. Tuner Input.
9. CD Input.
10. Video Input.
11. Tape Rec/Play.
12. Preamp Out, Main In.
13. Soft Clipping.
14. Speaker Impedance.

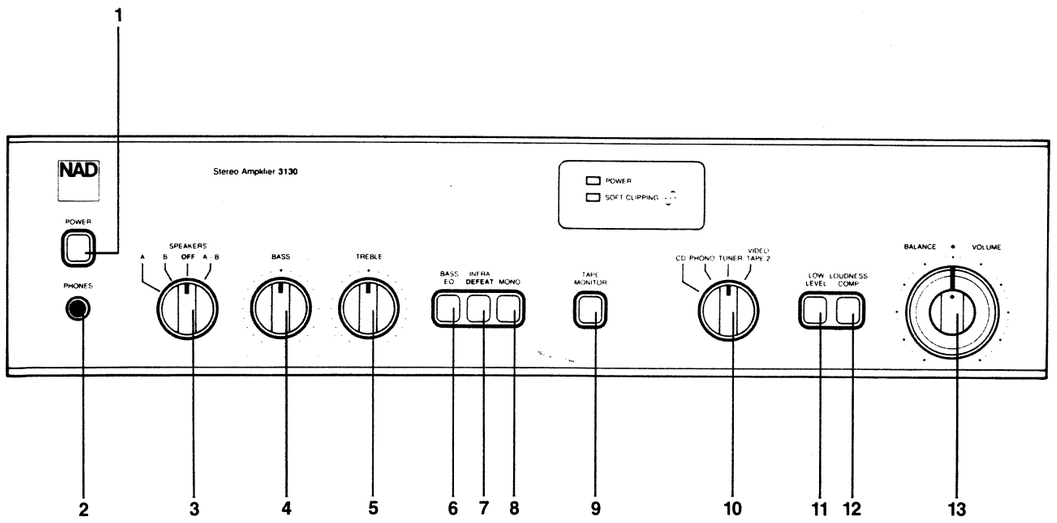


FRONT PANEL

1. Power.
2. Phones.
3. Speaker Selector.
4. Bass.
5. Treble.
6. Bass EQ.
7. Infrasonic Filter Defeat.
8. Mono.
9. Tape Monitor.
10. Input Selector.
11. Low Level.
12. Loudness Compensation.
13. Volume/Balance.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



Specifications, NAD 3130 Stereo Amplifier

Note: Measurements references to 8 ohms are taken with the Speaker Impedance selector set to "8Ω (High)." Measurements for 4 and 2 ohms are taken with the impedance selector at "4Ω (Normal)." Specifications are measured in accordance with E1A Standard RS-490 (IF A-202) for amplifiers and ANSI-IEEE Standard 185 (1975) (IHF T-200) for funers. Tuner sensitivity is measured via 75-ohm coaxial input and converted to equivalent 300-ohm values.

Power Amplifier Section, Stereo Mode		
CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (min. RMS power per channel Into 8 ohms, 20Hz–20kHz. both channels driven, with no more than the rated distortion)		30W
Rated distortion (THD), 20Hz–20kHz		0.03%
Clipping power	8 ohms	45 W
(max. continuous power per channel)	4 ohms	48 W
IF dynamic headroom at 8 ohms		+3 dB
IFH dynamic power	8 ohms	60 W
(max. short-term power per channel)	4 ohms	65 W
	2 ohms	85 W
Slew faction		> 50
Slew rate		15 V/used
Damping factor (ref. 8Ω at 50Hz)		> 50
Input Impedance		22 KΩ
Input sensitivity for TW/40W out		.15/.84 V
Power amp gain		25 dB
THD (Total Harmonic Distortion, 20Hz–20kHz. from 250mW to rated output)		< 0.03%
SMPTE I.M. (Intermodulation Distortion, 60Hz 1.7kHz. 4:1, from 250mW to rated output)		< 0.03%
IHF I.M. (CCIF IM Distortion, (9+20kHz at rated output)		< 0.03%
Bridged (Monophonic) Mode		
CONTINUOUS AVERAGE POWER OUTPUT INTO 8 OHMS (min. RMS power into 8 ohms. 20Hz–20kHz, with no more than the rated distortion)		
IHF Dynamic Headroom at 8 ohms		
Dynasmic power (max. short-term output, 8 ohms)		
Preamplifier Section,		
Phono Input		
Input Impedance (MM or MC)		R = 47KΩ, C=100pF
Input sensitivity (1 kHz)	MM:	0.45mV for 1W out
		2.5mV for 300W out
	MC:	0.04mV for 1W out
		0.25mV for 30W out
Input overload at	MM:	18mV/170mV/1.5V
20Hz/1kHz/20kHz	MC:	1.8mV/18mV/170mV
THD (20Hz–20kHz) and IM Dist. at +30 dB level		0.04%
RIAA response accuracy		0.5 dB
S/N ratio, IHF A-weighted,	MM:	76 dB re 5 mV
with cartridge connected	MC:	76 dB re 0.5mV
Line Level Inputs (Aux, Tape)		
Input Impedance		P=15KΩ; C=100pF
Input sensitivity		26mV for 1W out
		145mV for 30W out
Maximum input signal		> 10V
Signal to noise ratio, A-weighted		85 dB re 1W
		100 dB re 30W
Frequency response, 20Hz–20kHz		±0.5dB
Outputs		
Preamp output Impedance		800 ohms
Maximum output level		8V
Tape output impedance		1000 ohms
Tape output infrasonic fillter		3 dB at 13 Hz. 12 dB/octave
Controls		
Treble		±7 dB at 10KHz
Bess		±7 dB at 100Hz
Speaker Equalization		+3 dB at 60 Hz
		+6 dB at 30 Hz
Infrasonic filter (switchable)		–3 dB at 15 Hz
		12 dB/octave
Audio muting (low level)		–20 dB
FM Tuner Section		

ALIGNMENT METHOD

AUDIO SECTION 3130

IMPORTANT

Speaker Impedance switch should be in 8 ohm position while adjusting center voltage and idling current.

INITIAL ADJUSTMENT (No load connected)

A. CENTER VOLTAGE

1. Connect DC millivoltmeter to L channel output terminals.
2. Turn on and adjust to 0 V ± 30mV with VR401 (1KB). Connect DC millivoltmeter to R channel output terminals and adjust VR402 to 0 V ± 30mV.

B. IDLING CURRENT

1. Remove solder short across R461 and R462.
2. Connect DC millivoltmeter across R461 (1Ω) (output transistor's collector resistor) and adjust RX1 for 26-30mV reading on meter.
   Repeat adjustment with RX2, connecting meter across R462 (1Ω).
3. Leave power on for minimum 5 minutes.

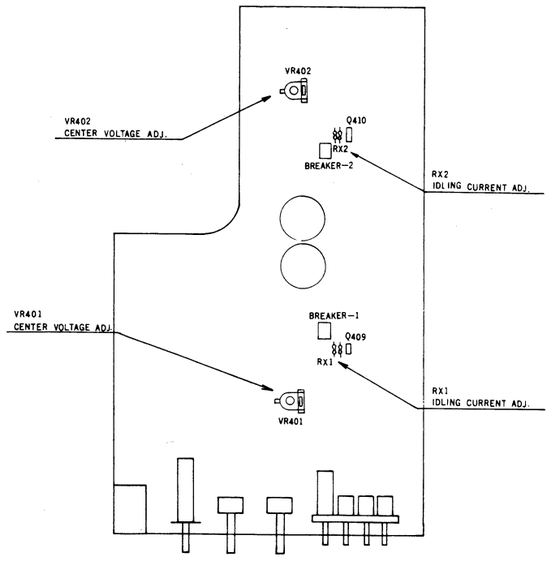
FINAL ADJUSTMENT

C. CENTER VOLTAGE

1. Repeat step A above.

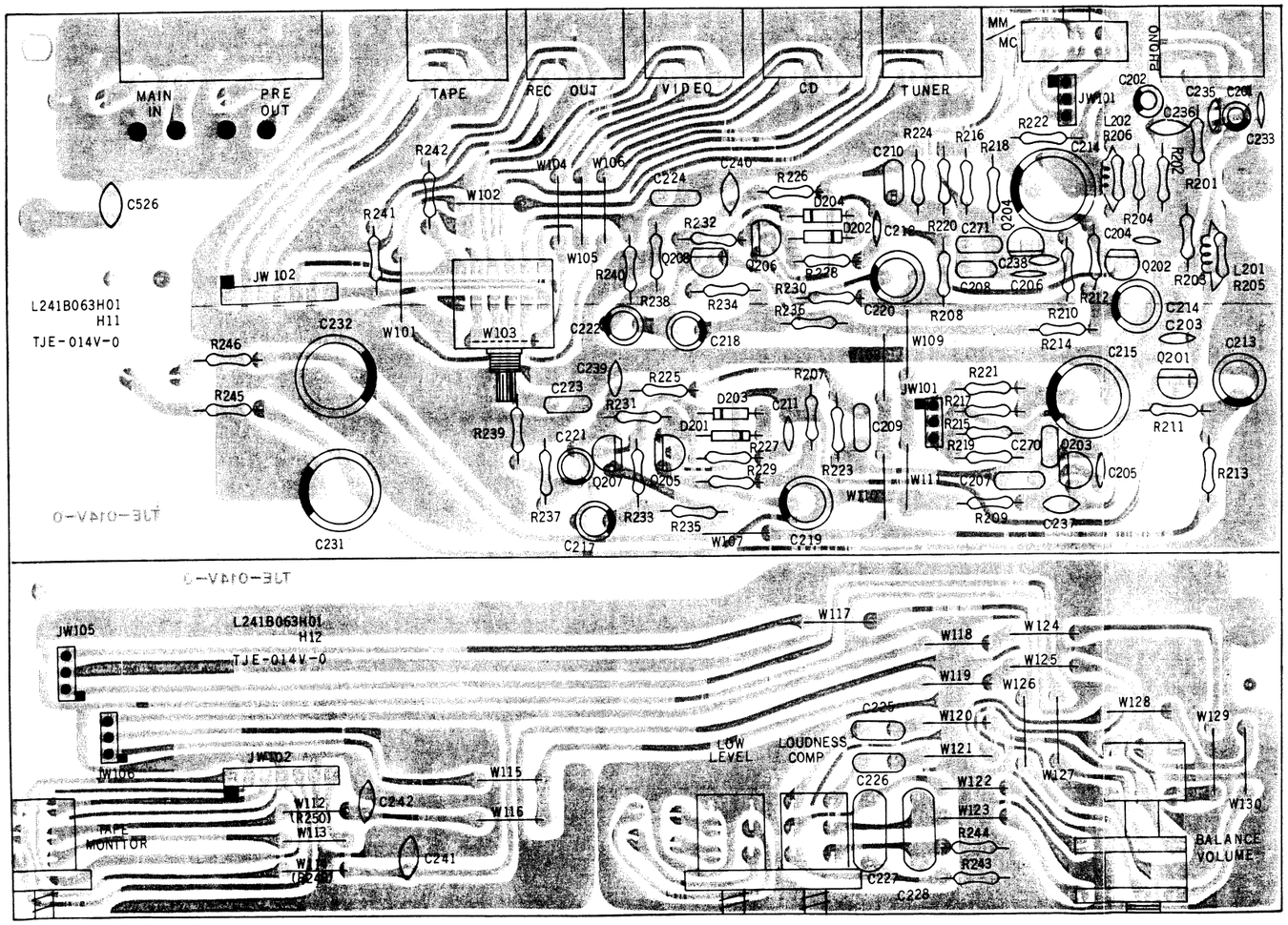
D. IDLING CURRENT

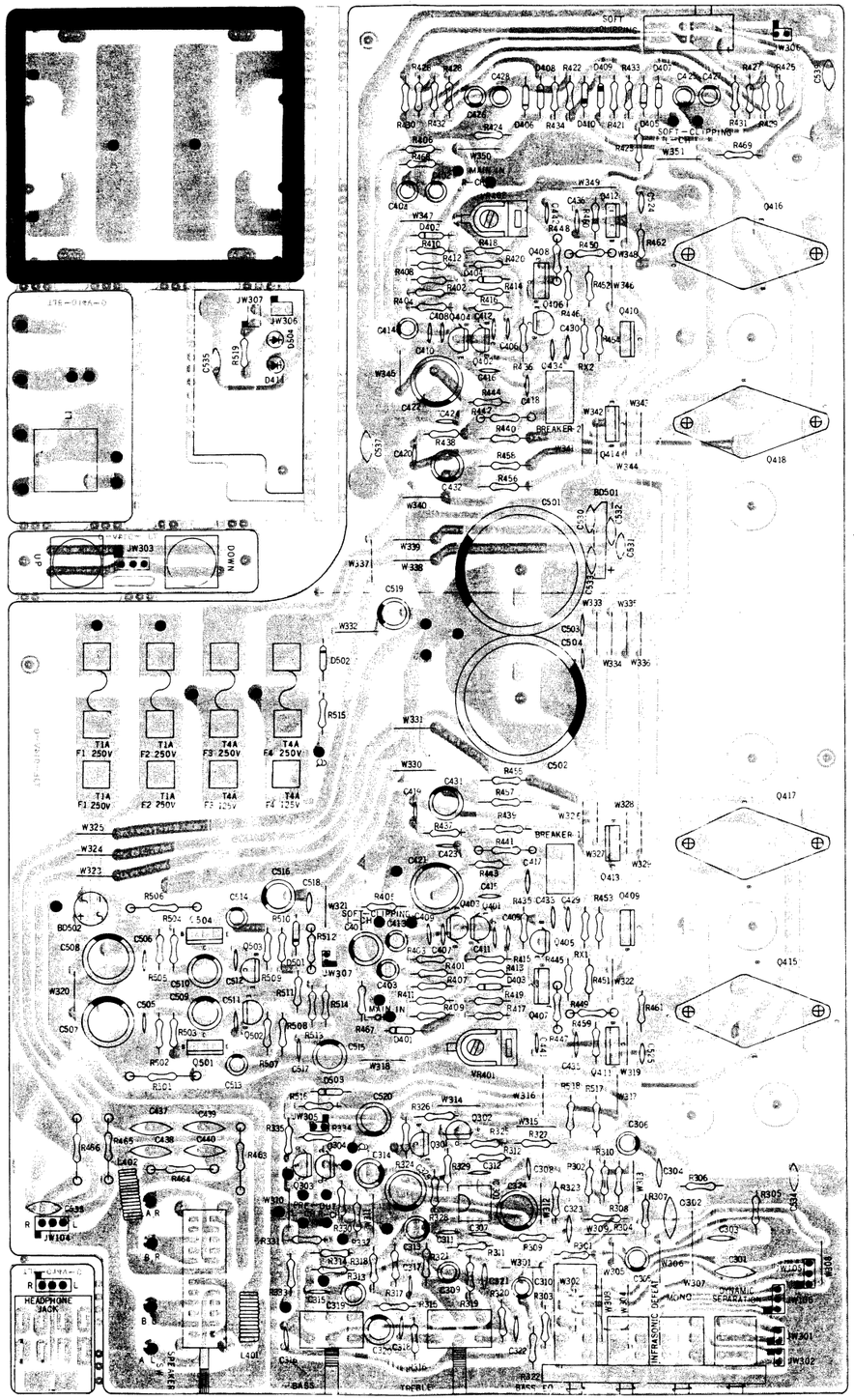
1. Repeat step B and adjust with RX1, RX2 for 30mV reading on meter.
2. After the alignment is finished, 1Ω resistor R461, 462 is shorted by solder short.



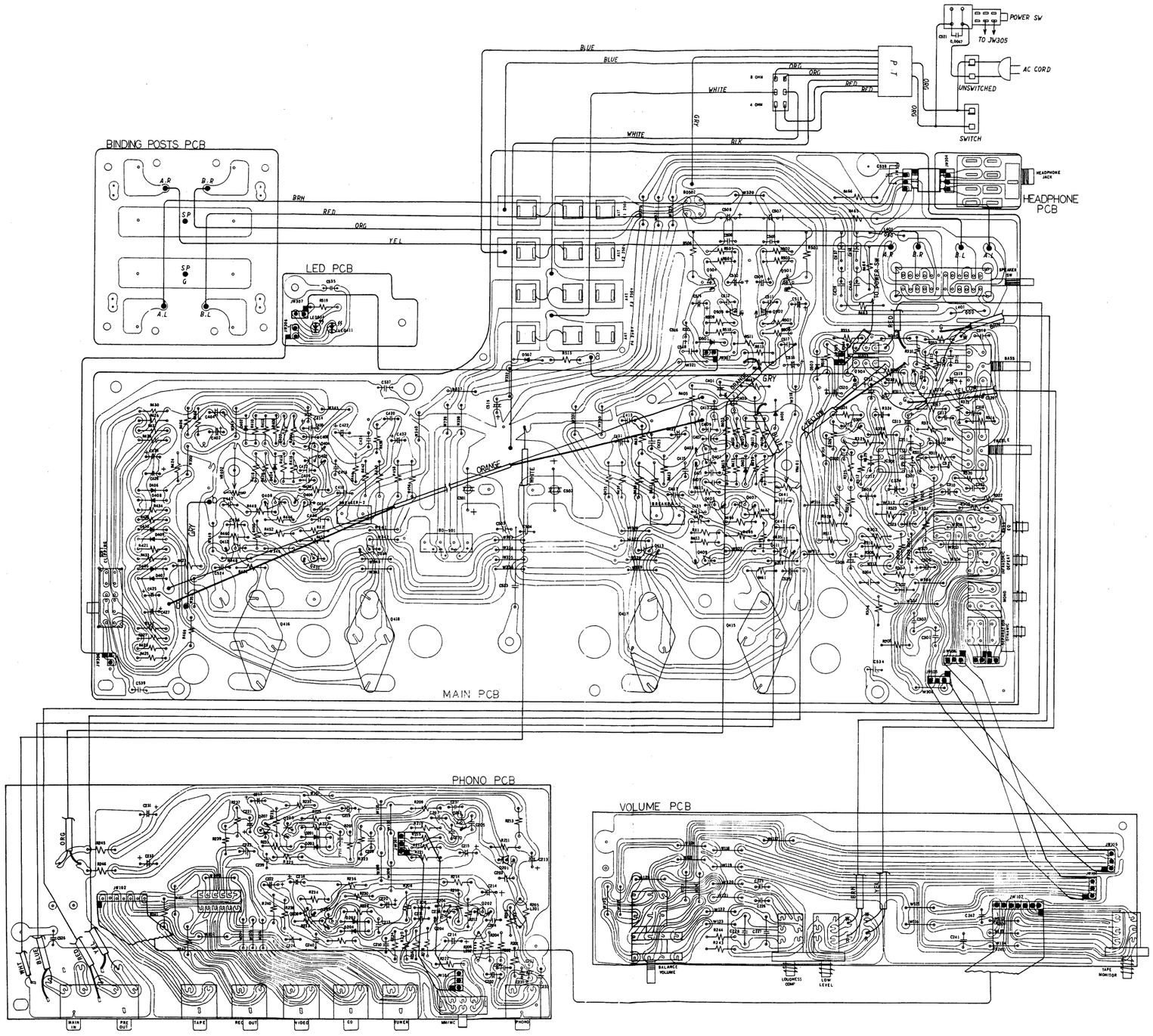
AMPLIFIER ADJUSTMENT POINTS

MAIN, VOLUME, PHONO, PCB COMPONENT LOCATION

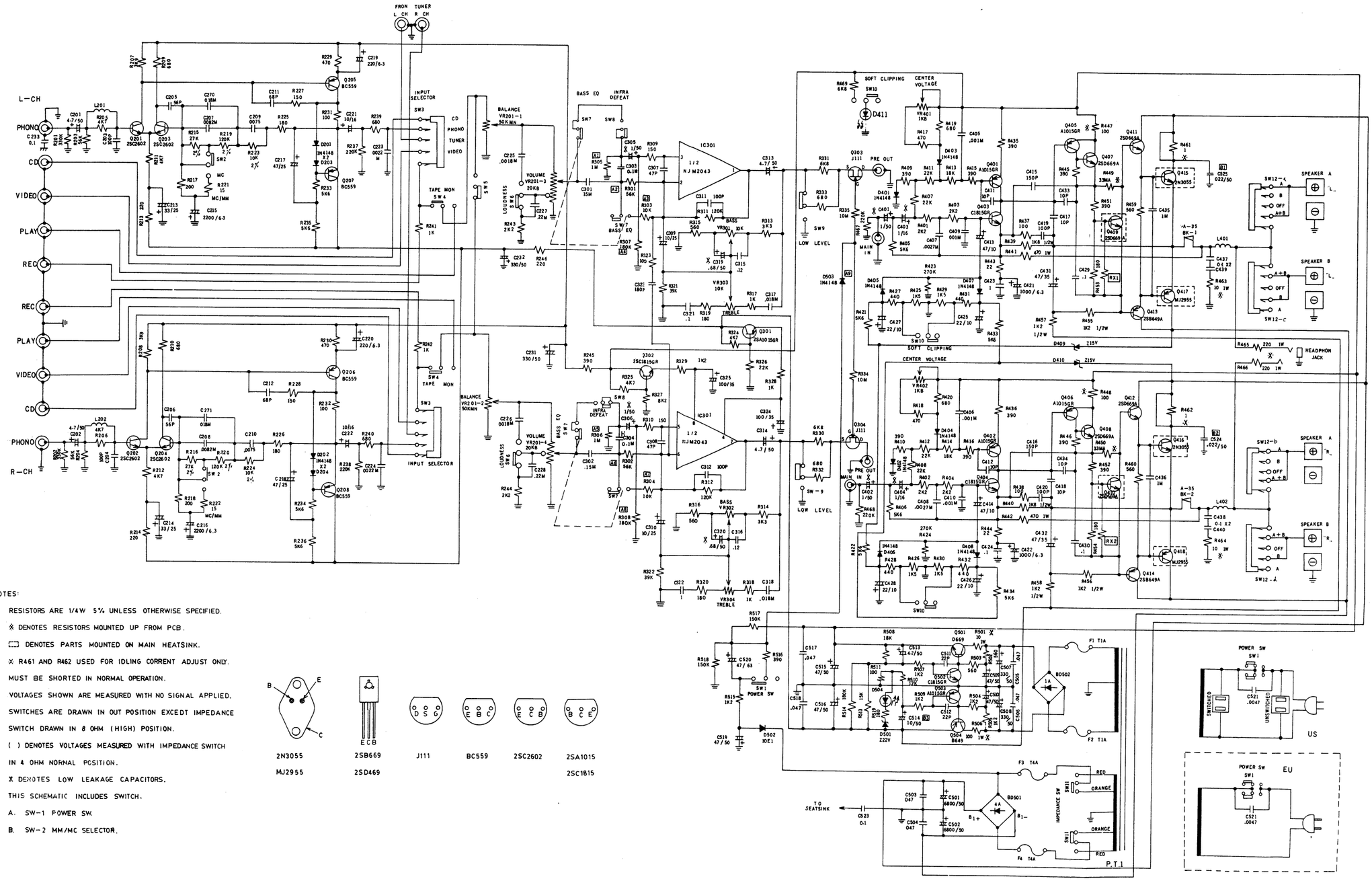




PCB LAYOUT AND WIRING DIAGRAM



SCHEMATIC DIAGRAM



NOTES:

1. RESISTORS ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.
2. ※ DENOTES RESISTORS MOUNTED UP FROM PCB.
3. ⬚ DENOTES PARTS MOUNTED ON MAIN HEATSINK.
4. ※ R461 AND R462 USED FOR IDLING CORRENT ADJUST ONLY. MUST BE SHORTED IN NORMAL OPERATION.
5. VOLTAGES SHOWN ARE MEASURED WITH NO SIGNAL APPLIED.
6. SWITCHES ARE DRAWN IN OUT POSITION EXCEDT IMPEDANCE SWITCH DRAWN IN 8 OHM (HIGH) POSITION.
7. ( ) DENOTES VOLTAGES MEASURED WITH IMPEDANCE SWITCH IN 4 OHM NORMAL POSITION.
8. ※ DENOTES LOW LEAKAGE CAPACITORS.
9. THIS SCHEMATIC INCLUDES SWITCH.
   A. SW-1 POWER SW.
   B. SW-2 MM/MC SELECTOR.

2N3055 MJ2955 | 2SB669 2SD469 | J111 | BC559 | 2SC2602 | 2SA1015 2SC1815

AD 3130 PARTS LIST

SYMBOL NO.	PART NO.	DESCRIPTION				REF
RX1 RX2	L103D003H01	Res, Carb.	440	±5%	1/4W	
RX1 RX2	L103D003H02	"	450	"	"	
RX1 RX2	L103D003H03	"	460	"	"	
RX1 RX2	U103S014H15	"	470	"	"	
RX1 RX2	L103D003H04	"	480	"	"	
RX1 RX2	L103D003H05	"	490	"	"	
RX1 RX2	L103D003H06	"	500	"	"	
RX1 RX2	U103S034H15	"	510	"	"	
RX1 RX2	L103D003H07	"	520	"	"	
RX1 RX2	L103D003H08	"	530	"	"	
RX1 RX2	L103D003H09	"	540	"	"	
RX1 RX2	U103S014H14	"	390	"	"	
RX1 RX2	L103D003H10	"	400	"	"	
RX1 RX2	L103D003H11	"	410	"	"	
RX1 RX2	L103D003H12	"	420	"	"	
RX1 RX2	L103D003H13	"	430	"	"	
R201	L103Y214H49	"	330K	"	"	
R202	"	"	"	"	"	
R203	L103Y214H40	"	56K	"	"	
R204	"	"	"	"	"	
R205	U103S014H27	"	4.7K	"	"	
R206	"	"	"	"	"	
R207	L103Y214H26	"	3.9K	"	"	
R208	"	"	"	"	"	
R209	L103Y214H17	"	680	"	"	
R210	"	"	"	"	"	
R211	L103Y214H27	"	4.7K	"	"	
R212	"	"	"	"	"	
R213	L103Y214H11	"	220	"	"	
R214	"	"	"	"	"	
R215	L103Y216H59	"	27K	±2%	"	
R216	"	"	"	"	"	
R217	L103Y216H08	"	200	"	"	
R218	"	"	"	"	"	
R219	L103Y216H75	"	120K	"	"	
R220	"	"	"	"	"	
R221	L103Y214H02	"	15	±5%	"	
R222	"	"	"	"	"	
R223	L103Y216H49	"	10K	±2%	"	
R224	"	"	"	"	"	
R225	L103Y214H10	"	180	±5%	"	
R226	"	"	"	"	"	
R227	L103Y214H09	"	150	"	"	
R228	"	"	"	"	"	
R229	L103Y214H15	"	470	"	"	
R230	"	"	"	"	"	
R231	L103Y214H07	"	100	"	"	
R232	"	"	"	"	"	
R233	L103Y214H28	"	5.6K	"	"	
R234	"	"	"	"		
R235	"	"	"	"		
R236	"	"	"	"	"	
R237	L103Y214H47	"	220K	"	"	
R238	"	"	"	"	"	
R239	L103Y214H17	"	680	"	"	
R240	"	"	"	"	"	
R241	L103Y214H19	"	1K	"	"	
R242	"	"	"	"	"	
R243	L103Y214H23	"	2.2K	"	"	
R244	"	"	"	"	"	
R245	L103Y214H13	"	330	"	"	
R246	L103Y214H11	"	220	"	"	
R247	U103S014H01	"	10	"	"	C1
R248	"	"	"	"	"	C1

SYMBOL NO.	PART NO.	DESCRIPTION				REF
R249	L103Y022H19	Res, Carb.	1K	±5%	1/4W	C1
R250	"	"	"	"	"	C1
R301	L103Y214H40	"	56K	"	"	
R302	"	"	"	"	"	
R303	L103Y214H31	"	10K	"	"	
R304	"	"	"	"	"	
R305	L103Y214H55	"	1M	"	"	
R306	"	"	"	"	"	
R307	L103Y214H46	"	180K	"	"	
R308	"	"	"	"	"	
R309	L103Y214H09	"	150	"	"	
R310	"	"	"	"	"	
R311	L103Y214H44	"	120K	"	"	
R312	"	"	"	"	"	
R313	L103Y214H25	"	3.3K	"	"	
R314	"	"	"	"	"	
R315	L103Y214H16	"	560	"	"	
R316	"	"	"	"	"	
R317	L103Y214H19	"	1K	"	"	
R318	"	"	"	"	"	
R319	L103Y214H10	"	180	"	"	
R320	"	"	"	"	"	
R321	L103Y214H38	"	39K	"	"	
R322	"	"	"	"	"	
R323	L103Y214H07	"	100	"	"	
R324	L103Y214H27	"	4.7K	"	"	
R325	"	"	"	"	"	
R326	L103Y214H35	"	22K	"	"	
R327	L103Y214H30	"	8.2K	"	"	
R328	L103Y214H19	"	1K	"	"	
R329	L103Y214H20	"	1.2K	"	"	
R330	L103Y214H29	"	6.8K	"	"	
R331	"	"	"	"	"	
R332	L103Y214H17	"	680	"	"	
R333	"	"	"	"	"	
R334	L103Y214H59	"	10N	"	"	
R335	"	"	"	"	"	
R401	L103Y214H23	Res, Carb.	2.2K	±5%	1/4W	
R402	"	"	"	"	"	
R402	"	"	"	"	"	
R403	"	"	"	"	"	
R404	"	"	"	"	"	
R405	L103Y214H28	"	5.6K	"	"	
R406	"	"	"	"	"	
R407	L103Y214H35	"	22K	"	"	
R408	"	"	"	"	"	
R409	L103Y214H14	"	390	"	"	
R410	"	"	"	"	"	
R411	L103Y214H35	"	22K	"	"	
R412	"	"	"	"	"	
R413	L103Y214H34	"	18K	"	"	
R414	"	"	"	"	"	
R415	L103Y214H14	"	390	"	"	
R416	"	"	"	"	"	
R417	L103Y214H15	"	470	"	"	
R418	"	"	"	"	"	
R419	L103Y214H17	"	680	"	"	
R420	"	"	"	"	"	
R421	L103Y214H28	"	5.6K	"	"	
R422	"	"	"	"	"	
R423	L103Y214H48	"	270K	"	"	
R424	"	"	"	"	"	
R425	L103Y215H21	"	1.5K	"	"	

SYMBOL NO.	PART NO.	DESCRIPTION				REF
R426	L103Y215H21	Res, Carb.	1.5K	±5%	1/4W	
R427	L103Y022H80	"	440	"	"	
R428	"	"	"	"	"	
R429	L103Y214H21	"	1.5K	"	"	
R430	"	"	"	"	"	
R431	L103Y022H80	"	440	"	"	
R432	"	"	"	"	"	
R433	L103Y214H28	"	5.6K	"	"	
R434	"	"	"	"	"	
R435	L103Y214H14	"	390	"	"	
R436	"	"	"	"	"	
R437	L103Y214H07	"	100	"	"	
R438	"	"	"	"	"	
R439	U103S024H22	"	1.8K	"	1/2W	
R440	"	"	"	"	"	
R441	U105S006H21	Res, Metal	470	"	1W	
R442	"	"	"	"	"	
R443	L103Y214H03	Res, Carb.	22	"	1/4W	
R444	"	"	"	"	"	
R445	L103Y214H14	"	390	"	"	
R446	"	"	"	"	"	
R447	U103S104H07	"	100	"	"	
R448	"	"	"	"	"	
R449	U105S023H07	Res, Metal	33	±10%	1/4W	
R450	"	"	"	"	"	
R451	L103Y214H14	Res, Carb.	390	±5%	"	
R452	"	"	"	"	"	
R453	L103Y214H10	"	180	"	"	
R454	"	"	"	"	"	
R455	U103S024H20	"	1.2K	"	1/2W	
R456	"	"	"	"		
R457	"	"	"	"	"	
R458	"	"	"	"	"	
R459	L103Y214H16	"	560	"	1/4W	
R460	L103Y214H16	"	"	"	"	
R461	L103Y214H62	"	1	"	"	
R462	"	"	"	"	"	
R463	U105S006H01	Res, Metal	10	"	1W	
R464	"	"	"	"	"	
R465	U105S006H17	"	220	"	"	
R466	"	"	"	"	"	
R467	L103Y214H47	Res, Carb.	220K	"	1/4W	
R468	"	"	"	"	"	
R469	L103Y214H29	"	6.8K	"	"	
R501	U105S006H01	Res, Metal.	10	"	1W	
R502	L103Y214H16	Res, Carb.	560	"	1/4W	
R503	"	"	"	"	"	
R504	L103Y214H20	"	1.2K	"	"	
R505	"	"	"	"	"	
R506	U105S006H13	Res, Metal.	100	"	1W	
R507	L103Y214H20	Res, Carb,	1.2K	"	1/4W	
R508	L103Y214H34	"	18K	"	"	
R509	L103Y214H20	"	1.2K	"	"	
R510	"	"	"	"		
R511	L103Y214H07	"	100	"	"	
R513	L103Y214H33	"	15K	"	"	
R514	L103Y214H46	"	180K	"	"	
R515	L103Y214H20	"	1.2K	"	"	
R516	L103Y214H14	"	390	"	"	
R517	L103Y214H45	"	150K	"	"	
R518	"	"	"	"	"	
R519	L103Y022H10	Res, Carb.	180	"	"	
R520	U105S006H46	Res, Metal.	10	"	2W	C1
R521	"	"	"	"	"	C1

SYMBOL NO.	PART NO.	DESCRIPTION				REF
R522	U105S006H46	Res, Metal.	10	±5%	2W	C1
R523	"	"	"	"	"	C1
C201	L182Y322H63	Cap, El.	4.7μF	+75—10%	50V	
C202	"	"	"	"	"	
C203	L140Y203H35	Cap, Cer.	100pF	±5%	50WV	
C204	"	"	"	"	"	
C205	L140Y203H29	"	56pF	"	"	
C206	"	"	"	"	"	
C207	L172Y306H12	Cap, Poly.	0.0082μF	±5%	50WV	
C208	"	"	"	"	"	
C209	L172Y004H01	"	0.0075μF	"	"	
C210	"	"	"	"	"	
C211	L140Y203H31	Cap, Cer.	68pF	"	"	
C212	"	"	"	"	"	
C213	L182Y322H36	Cap, El.	33μF	+50—10%	25V	
C214	"	"	"	"	"	
C215	U182S022H07	"	2200μF	+50—10%	6.3V	
C216	"	"	"	"	"	
C217	L182Y322H37	"	47μF	"	25V	
C218	"	"	"	"	"	
C219	L182Y322H03	"	220μF	"	6.3V	
C220	"	"	"	"	"	
C221	L182Y322H22	"	10μF	"	16V	
C222	"	"	"	"	"	
C223	L172Y306H05	Cap, Poly.	0.002μF	±5%	50WV	
C224	"	"	"	"	"	
C225	L172Y306H04	"	0.0018μF	"	"	
C226	"	"	"	"	"	
C227	U172S002H15	"	0.22μF	"	"	
C228	"	"	"	"	"	
C231	U182S022H70	Cap, El.	330μF	+50—10%	50V	
C232	"	"	"	"	"	
C233	U140S020H51	Cap, Cer.	0.1μF	±10%	25WV	A1
C233	"	"	"	"	"	A
C233	"	"	"	"	"	B
C233	"	"	"	"	"	C
C233	"	"	"	"	"	B1
C233	"	"	"	"	"	C3
C233	"	"	"	"	"	C2
C235	U150S008H44	Cap, Cer.	220pF	±5%	50WV	C1
C236	"	"	"	"	"	C1
C237	U150S008H40	"	150pF	"	"	C1
C238	"	"	"	"	"	C1
C239	U150S008H44	"	220pF	"	"	C1
C240	"	"	"	"	"	C1
C241	"	"	"	"	"	C1
C242	"	"	"	"	"	C1
C243	U150S008H36	"	100pF	"	"	C1
C244	"	"	"	"	"	C1
C270	L172Y306H16	Cap, Poly	0.018μF	±5%	50WV	
C271	"	"	"	"	"	
C301	U172S002H14	Cap, Poly.	0.15μF	±5%	50WV	
C302	"	"	"	"	"	
C303	U172S002H13	"	0.1μF	"	"	
C304	"	"	"	"	"	
C305	U182S033H40	Cap, El.	1μF	+75—10%	50V	
C306	"	"	"	"	"	
C307	L140Y203H27	Cap, Cer.	47pF	±5%	50WV	
C308	"	"	"	"	"	
C309	L182Y322H34	Cap, El.	10μF	+50—10%	25V	
C310	"	"	"	"	"	
C311	L140Y306H01	Cap, Cer.	100pF	±10%	50WV	
C312	"	"	"	"	"	
C313	L182Y322H63	Cap, El.	4.7μF	+75—10%	50V	

SYMBOL NO.	PART NO.	DESCRIPTION	REF
C314	L182Y322H63	Cap, El. 4.7μF +75–10% 50V	
C315	L172Y306H26	Cap, Poly 0.12μF ±5% 50WV	
C316	"	" " "	
C317	L172Y306H16	" 0.018μF " "	
C318	"	" " " "	
C319	L180Y022H01	Cap, El. 0.68μF +75–10% 50V	
C320	"	" " " "	
C321	U172S002H13	Cap, Poly 0.1μF ±5% 50WV	
C322	"	" " " "	
C323	L140Y306H04	Cap, Cer. 180pF ±10% 50WV	
C324	U182S022H49	Cap, El. 100μF +50–10% 35V	
C325	"	" " " "	
C401	U182S033H40	Cap, El. 1μF +75–10% 50V	
C402	"	" " " "	
C403	"	" " " "	
C404	"	" " " "	
C405	L172Y306H01	Cap, Poly. 0.001μF ±5% 50WV	
C406	"	" .. " "	
C407	L172Y306H06	" 0.0027μF " "	
C408	"	" " " "	
C409	L172Y306H01	" 0.001μF " "	
C410	"	" " " "	
C411	L140Y203H11	" 10pF ±0.5P "	
C412	"	" " " "	
C413	L182Y322H13	Cap, El. 47μF +50–10% 10V	
C414	"	" " " "	
C415	L140Y306H03	Cap, Cer. 150pF ±10% 50WV	
C416	"	" " " "	
C417	L140Y203H11	" 10pF ±0.5pF "	
C418	"	" " " "	
C419	L140Y306H01	" 100pF ±10% "	
C420	"	" " " " "	
C421	U182S022H06	Cap, El. 1000uF +50–10% 6.3V	
C422	"	" " " "	
C423	L140Y201H25	Cap, Cer. 0.1μF ±10% 25WV	
C424	"	" " " "	
C425	L182Y322H23	Cap, El. 22μF +50–10% 16V	
C426	"	" " " "	
C427	"	" " " "	
C428	"	" " " "	
C429	U172S002H13	Cap, Poly 0.1μF ±5% 50WV	
C430	"	" " " "	
C431	U182S022H77	Cap, El. 47μF +50–10% 63V	
C432	"	" " " "	
C433	L140Y203H11	Cap, Cer. 10pF ±0.5pF 50WV	
C434	"	" " " "	
C435	U172S002H13	Cap, Poly. 0.1μF ±5% 50WV	
C436	"	" " " "	
C437	U140S020H51	Cap, Cer. 0.1μF ±10% 25WV	
C438	"	" " " "	
C439	"	" " " "	
C440	"	" " " "	
C501	U180S016H01	Cap, El. 6800μF +50–10% 50V	
C502	"	" " " "	
C503	L140Y306H45	Cap, Cer. 0.047μF +80–20% 50WV	
C504	"	" " " "	
C505	"	" " " "	
C506	"	" " " "	
C507	U182S022H70	Cap, El. 330μF +50–10% 50V	
C508	"	" " " "	
C509	L182Y322H67	" 47μF + "	
C510	"	" " " "	
C511	L140Y203H19	Cap, Cer. 22pF ±5% 50WV	

SYMBOL NO.	PART NO.	DESCRIPTION	REF
C512	L140Y203H19	Cap, Cer. 22pF ±5% 50WV	
C513	L182Y322H63	Cap. El. 4.7μF +75–10% 50V	
C514	U182S022H04	Cap, El. 10μF " "	
C515	L182Y322H67	" 47μF " "	
C516	"	" " " "	
C517	L140Y306H45	Cap, Cer. 0.047μF +80–20% 50WV	
C518	"	" " " "	
C519	U182S022H77	Cap, El. 47μF +50–10% 63V	
C520	U182S022H77	" 47μF " 63V	
C521	U140Y007H07	Cap, Cer. 0.0047μF ±2% 400V	
C522			
C523	U140S020H51	Cap. Cer. 0.1μF ±10% 25WV	
C524	U140S005H29	" 0.022μF +80–20% 50WV	
C525	"	" " " "	
C526	U140S005H27	" 0.01μF +80–20% 50WV	C1
C527	U140S005H27	" 0.01μF " "	C1
C528	"	" " " "	C1
C529	U140S005H27	" 0.01μF " "	C1
C530	"	" " " "	
C531	"	" " " "	
C532	"	" " " "	
C533	U140S005H27	" 0.01μF " 50WV	
C534	U140S005H27	" " " "	C1
C535	U140S005H03	" " " "	C1
C536	U140S005H27	" " " "	C1
C537	U140S005H27	" " " "	C1
C538	"	" " " "	C1
C539	"	" " " "	C1
C541	U140S005H07	" 0.0047μF " "	
C542	"	" " " "	
C543	U140S005H03	" 0.001μF " "	
C544	"	" " " "	
Q201	L260D023H02	TR 2SC2602 (G)	
Q202	"	" "	
Q203	"	" "	
Q204	"	" "	
Q205	L260D027H03	TR BC559B	
Q206	"	" "	
Q207	"	" "	
Q208	"	" "	
Q301	L260D020H03	TR 2SA1015 (GR)	
Q302	U260S061H03	TR 2SC1815 (GR)	
Q303	L260D028H01	TR FET J111	
Q304	"	" "	
Q401	L260D020H03	TR, 2SA1015 (GR)	
Q402	"	" "	
Q403	U260S061H03	TR, FET J111	
Q404	"	"	
Q405	L260D020H03	TR, 2SA1015 (GR)	
Q406	"	" "	
Q407	L260D024H05	TR, 2SD669A (C)	
Q408	"	" "	
Q409	L260D024H05	TR, 2SD669 (C)	
Q410	"	" "	
Q411	L260D024H05	" "	
Q412	"	" "	
Q413	L260D021H05	TR, 2SB649A (C)	
Q414	"	" "	
Q415	L260D017H01	TR, 2N3055	
Q416	"	" "	
Q417	L260D018H01	TR, MJ2955	
Q418	"	" "	
Q501	L260D024H05	TR, 2SD669A (C)	

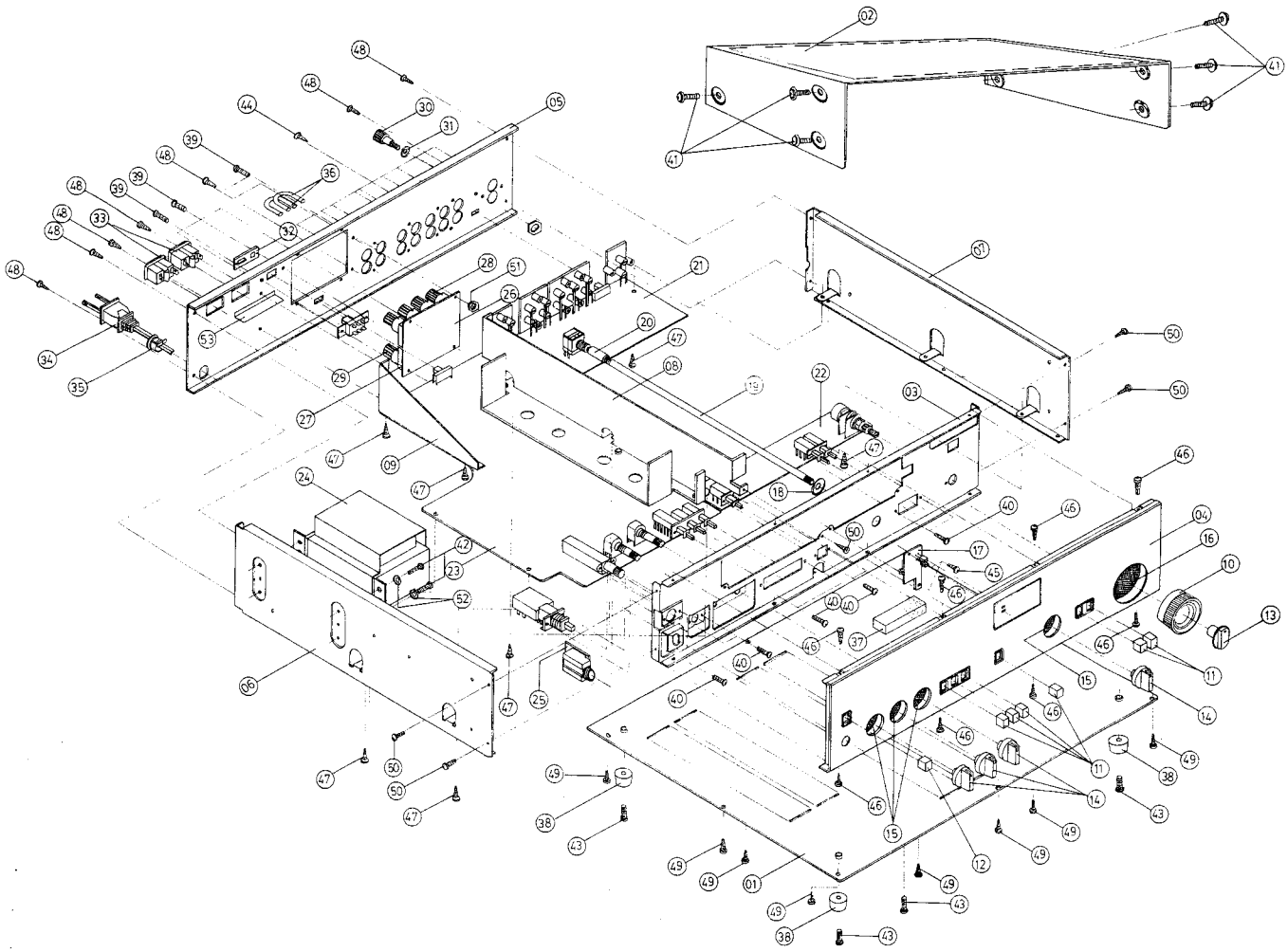
SYMBOL NO.	PART NO.	DESCRIPTION	REF
Q502	U260S061H03	TR, 2SC1815 (GR)	
Q503	L260D020H03	TR, 2SA1015 (GR0	
Q504	L260D021H05	TR, 2SB649A (C)	
D201	U264D037H01	DIODE 1N4148	
D202	"	" "	
D203	"	" "	
D204	"	" "	
D401	U264D037H01	DIODE 1N4148	
D402	"	" "	
D403	"	" "	
D404	"	" "	
D405	"	" "	
D406	"	" "	
D407	"	" "	
D408	"	" "	
D409	L264C003H53	DIODE ZENER UZ-15BL	
D410	"	" "	
D501	L264C003H67	DIODE ZENER UZ-22BH	
D502	U264S003H01	DIODE 10EI	
D503	U264D037H01	" 1N4148	
BD501	L264D018H01	DIODE PBL403	
BD502	L264D017H01	" PB153M	
LED	L268Y026H01	LED SE-9421D GREEN	
LED	L268Y027H01	LED SE-9431D YELLOW	
IC301	L262C020H01	IC NJM2043 (D)	
L201	L351Y004H01	COIL-TORIC	
L202	"	"	
L301	361Y023H01	COIL-SPRING	
L302	"	"	
BK-1	L422Y001H01	BREAKER 3.5A	
BK-2	"	"	
VR201	L121Y009H01	VR VOLUME 20KB+50KMN	
VR301	L121Y010H01	VR 10KBx2	
VR302	"	"	
VR401	U127S001H03	VR-SEMI B1K x 2	
VR402	"	" "	
SW	430Y010H01	SW-ROTARY SPK-SW	
SW	L431Y014H01	SW-SLIDE SOFT CLIPPING SW	
SW	L432Y045H01	SW-PUSH MONO/INFRA/BASS	
SW	L431Y012H01	SW-SLIDE MM/MC	
SW	L430Y009H01	SW-SELECT CD/PHONO/TUNE/AUX	
SW	L432Y028H01	SW-PUSH LOW LEVEL LOUDNESS	
SW	L432Y029H01	SW-PUSH TAPE MONITOR	
J	L440Y005H01	RCA JACK PHONO	
J	L440Y006H01	RCA JACK PREOUT/MAIN IN TAPE/REC-OUT	
J	L440Y008H01	RCA JACK TUNER/CD/AUX	
J	U451S015H01	JACK HEAD PHONE	
JP1-JP7	U685S223H01	PIN	
SW	L431Y013H01	SW, SLIDE 4Ω/8Ω	A1
SW	L431Y016H01	SW, SLIDE 4Ω/8Ω	A
SW	L431Y013H01	" "	B
SW	L431Y013H01	" "	C1
SW	L431Y013H01	" "	C
SW	L431Y013H01	" "	B1
SW	L431Y013H01	" "	C3
SW	L431Y013H01	" "	C2

SYMBOL NO.	PART NO.	DESCRIPTION	REF
SW	L432Y035H01	SW-POWER	A1
SW	"	"	A
SW	L432Y034H01	"	B
SW	"	"	C1
SW	"	"	C
SW	"	"	B1
SW	"	"	C3
SW	"	"	C2
PT	L350Y039H01	TRANS-POWER	A1
PT	L350Y032H01	"	A
PT	L350Y041H01	"	B
PT	L350Y042H01	"	C1
PT	L350Y042H01	"	C
PT	L350Y041H01	"	B1
PT	L350Y043H01	"	C3
PT	L350Y042H01	"	C2
F	U283S015H10	FUSE 1A	A1
F	"	" "	A
F	U283S022H17	" "	B
F	"	" "	C1
F	"	" "	C1
F	"	" "	B1
F	U283S015H10	" "	C3
F	U283S022H17	" "	C2
F	U283S015H16	FUSE 4A-UL	A1
F	"	" "	A
F	U283S022H22	" 4A-SEMKO	B
F	"	" "	C1
F	"	" "	C
F	"	" "	B1
F	U283S015H16	" 4A-UL	C3
F	U283S022H22	" "	C2
	L457D002H01	FUSE HOLDER	A1
	"	"	A
	L457D501H01	"	B
	"	"	C1
	"	"	C
	"	"	B1
	L457D002H01	"	C3
	L457D501H01	"	C2
	L230Y002H01	CONNECTOR	B
	L230Y002H01	"	C1
	"	"	C
	"	"	B1

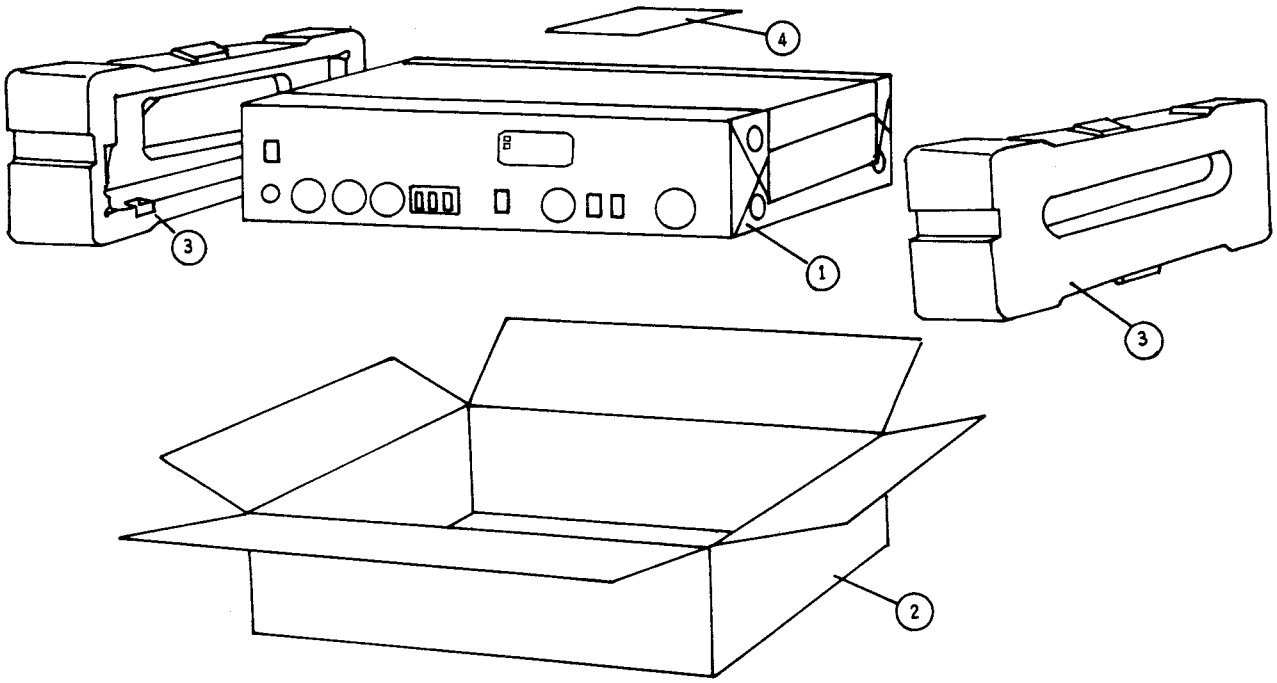
Item	Parts No.	Name		Q'ty
01	L580A001H01	Cover Bottom		1
02	L561A001H01	Cabinet		1
03	L582A001H01	Chassis, Front Sub		1
04	L702A017H01	Panel, Front		1
05	L582A002H04	Panel, Rear	A1	1
05	L582A002H04	"	A	1
05	L582A002H06	"	B	1
05	L582A002H07	"	C1	1
05	1582A002H07	"	C	1
05	L582A002H06	"	B1	1
05	L582A002H04	"	C3	1
05	L582A002H08	"	C2	1
06	L547B005H01	Frame (L)		1
07	L547B006H01	Frame (R)		1
08	L565B002H01	Heat Sink		1
09	L541C017H01	Bracker, PCB Support		1
10	L704D062H01	Knob Volume		1
11	L704D061H01	Knob, Function Selector		6
12	L704D061H02	Knob Power		1
13	L704D065H01	Knob Balance		1
14	L704D064H01	Knob Rotary		4
15	L550D037H01	Ring, Felt Tonecontroll		4
16	L550D037H02	Ring, Felt Volumecontroll		4
17	L241B072G30	PCB Ass'y Main (LED)		1
18	L550D036H01	Bearing Shaft		1
19	L531D017H01	Shaft, input Selector		1
20	L562D022H01	Sleeve, input Selector Switch		1
21	L241B073G10	PCB Ass'y Control (PHONO)		1
22	L241B073G20	PCB Ass'y Control (VOL)		1
23	L241B072G01	PCB Ass'y Main		1
24	L350Y039H01	Transformer, Main Power		1
25	L241B072G40	PCB Ass'y Headphone		1
26	L241B072G20	PCB Ass'y Binding Posts		1
27	L541B018H01	Binding Posts Loudspeaker		2
28	L704C013H01	Hand Post (BLK)		4
29	L704C013H02	Hand Post (RED)		4
30	L531D018H01	Binding Post Ground		1
31	U683D011H01	Washer Plane		1
32	L703D027H01	Plate Switch Lock		1
33	L449Y002H02	AC Socket	A1	2
33	L449Y002H02	"	A	2
33	L449Y002H02	"	C3	2
33	L449Y002H02	"	C2	2
34	L242Y501H01	AC Cord	A1	1
34	L242Y501H01	"	A	1
34	U242C872H06	"	B	1
34	U242C809H18	"	C1	1
34	U242C809H18	"	C	1
34	L242C013H01	"	B1	1
34	L242C013H01	"	C3	1
34	L242C809H18	"	C2	1
35	L540D501H01	Clamper		1
36	L291D006H01	Bar Link		1
37	L552D013H01	Cushion Sponge		1
38	L771D006H01	Foot Rubber		4
39	U650S065H19	Screw-BM3x6		6
40	U650S063H19	Screw-B M3x6		10
41	L650D005H03	Screw-B M4x8		6
42	U650S063H95	Screw-P M4x10		4
43	U650S025H31	Screw-P M4x10		4
44	U656S164H23	Screw-Tap 1-3x6		10
45	U656S263H23	Screw-Tap 2-3x6		2
46	U656S164H23	Screw-Tap 1-3x6		8
47	U656S263H23	Screw-Tap 2-3x6		11
48	U656S164H23	Screw-Tap 1-3x6		8

Item	Parts No.	Name		Q'ty
49	U656S263H23	Screw-Tap 2-3x6		8
50	U656S263H23	Screw-Tap 2-3x6		5
51	U670S003H02	Nut M3		4
52	U680S322H03	Washer Toothed 3		4
53	L840D009H01	Cover-AC Socket	A1	1
53	L840D009H01	"	A	1
53	L840D009H01	"	C3	1
53	L840D009H01	"	C2	1

EXPLODED VIEW



PACKING DIAGRAM



Item	Number	NAME	Q'ty
1	L831D002H01	Bag-Poly	1
2	L800D003H02	Carton Individual	1
3	L813A006H01	Styro Packing	2
4	L871B001H70	Instruction	1